

## REMARKS

The term “substrate” in claim 1 is supported by the same term in claim 10, now canceled. As explained below, the remaining amendments in claim 5 are consistent with the understanding of the Examiner of the meaning of the claim limitations. Note that the limitation “measuring topography as a function of a distance in down track direction of the substrate or of the disc media surface” is supported by paragraph [0029] which states “ $\lambda$ , may be in down track direction” and paragraph [0036] which explains that the topographical measurements are taken on the disc media surface.” The limitation “performing a Fourier transform of the topography as a function of the distance to obtain a squared topography function as a function of wavelength” is supported by paragraph [0036] which states, “The topographical function is transformed at step 32 from *physical contour* into wavelength. For example, a discrete Fourier transform may be used for this transformation.” Emphasis added. The limitation “integrating the product over a range of wavelengths to obtain the head-media spacing” is supported by Equation (1A).

Claim 5 has been objected as it read “A method of determining a a head-media spacing ... .” The double occurrence of “a” has been corrected in this Amendment.

Claims 5-16 and 16-20 were rejected under 35 USC 101 as being directed to a non-statutory subject matter. This rejection is respectfully traversed.

MPEP 2106, citing *Diamond v. Diehr*, 450 U.S. at 187, 209 USPQ at 8, states that “if a process claim includes one or more post-computer process steps that result in a physical transformation outside the computer (beyond merely conveying the direct result of the computer operation), the claim is clearly statutory.” In claim 5, the step of “measuring topography as a function of a distance in down track direction of the substrate or of the disc media surface” requires physical acts to be performed outside the computer such as “sampling topography” (see claim 7) by a physical instrument such a topography profiler. This step of “measuring topography as a function of distance in down track direction of the substrate or of the disc media surface” is independent of the steps to be performed by a programmed computer, where the step

involves the manipulation of tangible physical objects, e.g., the substrate or the disc media surface.

Claims 5-15 were rejected under 35 USC 112, first paragraph. This rejection is respectfully traversed.

On page 9 of the Action, the Examiner asserts that the equation in the specification defines “the square root of the integral of the squared topography function multiplied by the air bearing transfer function provides a head-media spacing modulation.” This statement is correct. Thus, Applicants have amended claims 11 and 13 to recite “Y is a squared topography function as a function of wavelength” and claim 5 has been amended to clearly recite “performing a Fourier transform of the topography as a function of the distance to obtain a squared topography function as a function of wavelength; multiplying the squared topography function as a function of wavelength and the air bearing transfer function as a function of wavelength to obtain a product.”

On page 9, last paragraph, the Examiner has asked for clarification regarding the meaning of Equations (1) and (1A), especially regarding the limitation “multiplying the topography function and the air bearing transfer function to provide the head-media spacing modulation.” The amendment of claims 11 and 13 now clarify the meaning of Equations (1) and (1A) in accordance with the Examiner’s understanding of these equations.

Claims 5-15 were rejected under 35 USC 112, second paragraph. This rejection is respectfully traversed.

In paragraph 6, the Examiner states that the specification does not provide a relationship between simulating a head passing in near proximity to a simulated disc media surface and the generation of the an air bearing function. Claim 5 has been amended so that it no longer recites the limitation “simulating a head passing in near proximity to a simulated disc media surface to generate an air bearing transfer function.” Note that as recited in claim 8, one way of generating an air bearing function is by “determining an air bearing transfer function from an air bearing

code the head.” Claim 10 has been canceled; thus, the rejection of claim 10 under 35 USC 112, second paragraph, is now moot.

Claims 5-16 and 18-20 were rejected under 35 USC 102(a) as being anticipated by Gonzalez.

The pending application claims benefit from Provisional Application 60/276,764, filed March 16, 2001. Gonzalez was published in July 2001. The Examiner states that the IEEE meeting occurred on January 7-11, 2001. Applicants respectfully submit that the Examiner has not presented any evidence that what he is relying in Gonzalez was available to the public at the IEEE meeting of January 2001 or prior to March 16, 2001. The evidence stated on page 19 of the Action does not prove that the Gonzalez reference was available in January 2001.

The Examiner states that the citation page attached to the Gonzalez reference states “Meeting Date: 01/07/01 – 01/11/01.” How does this prove that the Gonzalez reference was available in January 2001?

The table of contents from the “IEEE Transactions on Magnetics,” July 2001, states “Selected Papers from the Eighth Joint Magnetism and Magnetic Materials – International Magnetics Conference (MMM-INTERMAG) ... January 7-11, 2001” and lists the Gonzalez reference on page 8. Thus, the Examiner is *assuming* that the Gonzalez reference *must* have been presented *in its entirety* at the conference in January 2001. Applicants respectfully submit that this assumption is still not proven by *evidence*.

In fact, as explained by the Examiner, the call for papers for Intermag 2000 states that all manuscripts must be received by October 13, 2000. The undersigned himself used to be a scientist at one time and he is fully aware that is quite common practice among scientists to submit a manuscript in response to the call for papers and later not show up at all to present the paper at the conference or to present only a portion of the paper at the conference because of the short time period allocated to each presenter at the conference to present the paper. In light of such common practices among scientists, Applicants are again requesting the Examiner to provide evidence that the Gonzalez reference was in fact presented at the conference in January

2001 in its entirety or least to the extent relied upon by the Examiner in making the rejection. So far, the Examiner has failed to provide this evidence. Therefore, the USPTO has failed to establish a *prima facie* case of anticipation.

Claim 16 has been rejected as being obvious over Bogy. This rejection is moot as claim 16 has been canceled.

In light of this Amendment, a Notice of Allowance is respectfully solicited.

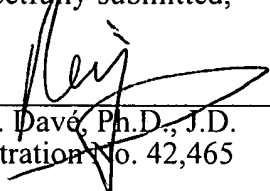
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Respectfully submitted,

By:

  
Raj S. Dave, Ph.D., J.D.  
Registration No. 42,465

Morrison & Foerster LLP  
1650 Tysons Blvd., Suite 300  
McLean, VA 22102  
Telephone: 703.760.7755